

Planck 2013 results. XXXII. the updated Planck catalogue of Sunyaev-Zeldovich sources

Ade P., Aghanim N., Armitage-Caplan C., Arnaud M., Ashdown M., Atrio-Barandela F., Aumont J., Aussel H., Baccigalupi C., Banday A., Barreiro R., Barrena R., Bartelmann M., Bartlett J., Battaner E., Benabed K., Benoît A., Benoit-Lévy A., Bernard J., Bersanelli M., Bielewicz P., Bikmaev I., Bobin J., Bock J., Böhringer H., Bonaldi A., Bond J., Borrill J., Bouchet F., Bridges M., Bucher M., Burenin R., Burigana C., Butler R., Cardoso J., Carvalho P., Catalano A., Challinor A., Chamballu A., Chary R., Chen X., Chiang H., Chiang L., Chon G., Christensen P., Churazov E., Church S., Clements D., Colombi S., Colombo L., Comis B., Couchot F., Coulais A., Crill B., Curto A., Cuttaia F., Da Silva A., Dahle H., Danese L., Davies R., Davis R., De Bernardis P., De Rosa A., De Zotti G., Delabrouille J., Delouis J.

Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

© ESO, 2015. We update the all-sky Planck catalogue of 1227 clusters and cluster candidates (PSZ1) published in March 2013, derived from detections of the Sunyaev-Zeldovich (SZ) effect using the first 15.5 months of Planck satellite observations. As an addendum, we deliver an updated version of the PSZ1 catalogue, reporting the further confirmation of 86 Planck-discovered clusters. In total, the PSZ1 now contains 947 confirmed clusters, of which 214 were confirmed as newly discovered clusters through follow-up observations undertaken by the Planck Collaboration. The updated PSZ1 contains redshifts for 913 systems, of which 736 (~80.6%) are spectroscopic, and associated mass estimates derived from the Yz mass proxy. We also provide a new SZ quality flag for the remaining 280 candidates. This flag was derived from a novel artificial neural-network classification of the SZ signal. Based on this assessment, the purity of the updated PSZ1 catalogue is estimated to be 94%. In this release, we provide the full updated catalogue and an additional readme file with further information on the Planck SZ detections.

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Keywords

Catalogs, Errata, addenda, Galaxies: clusters: general, Large-scale structure of Universe